

METHOD OF FORMING A TUNNELING MAGNETORESISTIVE HEAD
ABSTRACT OF THE DISCLOSURE

A method of forming a tunneling magnetoresistive head begins by forming a tunneling magnetoresistive stack having a tunnel barrier. An air bearing surface is formed of the tunneling magnetoresistive stack. The air bearing surface is ion etched causing a deficiency of a constituent in a portion of the tunnel barrier adjacent the air bearing surface. The deficiency of the constituent is replenished in the portion of the tunnel barrier adjacent the air bearing surface to restore the electrical properties of the tunnel barrier.